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# **FARM RENT DETERMINATION PROBLEM**

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# YOUR FARM RENT DETERMINATION PROBLEM

By

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The most important decision that you will make as landlord and tenant is how expenses and income will be shared. You should try to have each party contribute those resources that he can supply best. The broad classes of resources are land, labor, capital, and management. Each of these classes is made up of numerous separate items that demand attention.

Your basic objective should be to furnish these resources under such circumstances as will encourage sound farming and maximum net farm income, so that each will receive the income that his resources earn in the business.

These things will not be done automatically; they will come about only through the efforts you make. If you do not attain these conditions, your farm will not be operated as efficiently as it could be.

If either party does not get the income earned by his resources, he will be encouraged to use fewer resources on the farm than should be used.

The key idea is to attempt to share farm income on the basis of each party's contribution to that income. You should first be aware of the problems this entails. Then you are in position to work on their solution. Some of the major problems are outlined in this bulletin.

The general problems, basic principles, and incentive conditions are applicable to all kinds of leases. We outline here some of the problems of sharing costs and returns, presenting the basic principles that should guide your discussion. We try to outline a specific method applicable to your situation. Some alternatives are suggested. Things to do and not to do are mentioned. The presentation shows, step by step, the procedure that should be followed.

## PROBLEMS IN DETERMINING A FAIR RENTAL

You are likely to face four basic problems (or obstacles) in determining the rental for your farm. They are—

- How to avoid dependence on local custom as the sole basis for determining the farm rental.
- How to fit the sharing of income and expenses to the various kinds of rent and the combination of more than one kind of rent.
- How to provide an adequate supply of all resources needed to maximize net farm income.
- How to encourage expenditures for resources that may last beyond the term of the lease.

## Local Custom

One of the first problems that you must solve is how much to rely on local custom. The prevailing custom of the community is not the only way of sharing costs and returns. Prevailing practices usually cover a fairly large geographic area. Within this area, individual farms differ greatly in such matters as size, productivity, physical makeup, and location as to public services. Number, size, and quality of buildings vary widely. Individual landlords and tenants differ as to what they can best contribute to the farm business. Many conditions vary from year to year on the same farm.

Much local custom originated under quite different farming practices and cost-price relationships. New technological developments alone are enough to suggest that you discard some prevailing practices that emerged in an earlier period. Changes in relative prices of various items over a few years may well throw out of line arrangements that worked well in the past. To a lesser extent, changes in government agricultural programs may also alter cost-price relationships.

With such wide variation and frequent change, it is doubtful whether community custom is a reliable guide as to how you should share expenses and returns on your farm. At best, custom is a point of departure. Study your situation and perhaps you can improve on local practices.

## Kinds of Rent

A second problem that you will need to solve originates in variations that arise from the several kinds of rent—cash, share, and standing. Selection of

the kind of rent to be paid should hinge largely on three items:

- The resources that can best be supplied by each party.
- The risks each party wants to assume.
- The degree of management each party wants to exercise.

But, once this decision is reached, you will need to adapt the division of costs and returns between the two parties to the kind of rent selected.

Under cash rent, each party will want to supply different resources than if share rent were used. This is true whether the cash rent is a fixed amount for the farm, per acre of land, or per head of livestock, or whether it may vary according to prices and production. For example, if the landlord receives cash rent for the entire farm, he will not want to pay variable expenses. Conversely, if share rent is used, variable expenses should be paid jointly.

The problem of deciding upon the amount of cash rent differs from that presented in arriving at an equitable sharing of income under share renting. For one thing, the amount of your cash rent depends heavily on the anticipated level of prices of farm products, while the fractional share under share rent depends entirely on the relative contributions of the two parties. The productivity of the farm, of course, should influence both. The amount of standing rent (i.e., a fixed quantity of produce) depends largely upon the estimated productivity of the farm. It is similar to cash rent except that it is paid in farm products.

Variable or flexible cash rent introduces a new factor into the calculation—the landlord assumes part of the

risk for changes in prices or production conditions, or both. Standing rent requires that the landlord assume a part of the risk of changes in prices of farm products. The same share-rent principles and procedures are used in determining both crop-share and live-stock-share rent.

When both cash and share rent are paid, procedures for determining share rent are followed for some enterprises and cash rent procedures are followed for others. The basic objectives and general principles for determining rent are the same in each instance, but their application differs.

In determining rent, adapt your calculations to the kind of rent to be paid. You should not expect to furnish exactly the same resource or the same proportion of various resources under different kinds of rent. You should not expect the same amount of gross or net income in any one year under different kinds of rent. Your share of expenses and risks will vary, depending on the kind of rent you use.

Differences in the several kinds and combinations of rent are closely related to—

- Who furnishes what resource.
- What resources are supplied jointly.
- How jointly supplied items are divided.
- How the amount of rent is determined.

Suggestions to cover these variations are made after basic principles and procedures have been presented.

### **Size of Business**

You cannot solve the problem of small size by any unique procedure for

sharing costs and returns. Dividing a small income is more difficult than sharing a large one. If the farm is too small, it may well be combined with more land or other resources to permit more efficient use of all the farm's resources, whether land, labor, live-stock, machinery, or capital for current operating expenses. The tenant may need to find off-farm employment for his labor, to use his machinery in custom work, or otherwise to utilize his resources more effectively.

### **Planning Period**

Expenditures for long-term investment items that are incurred by either party in 1 year but that are not used up during the prospective term of the lease are the core of another type of problem. For example, limestone and some fertilizers are not used up completely within 1 year. This is true also for such land improvements as terraces, grass waterways, wells, ponds, forestation; and permanent pasture. Investments in livestock or machinery especially adapted to the particular farm are other examples.

The problem is not difficult if the tenant can take his resources with him when he leaves the farm. This can be done with some resources. But others like those mentioned above become a part of the farm and are not physically removable. If the tenant has contributed to this type of item, some arrangement should be worked out to compensate him for his contribution when he leaves the farm or he will not want to contribute even a part of these needed resources. Likewise, compensation provisions may be needed for the landlord, if he furnishes inputs that are of value to a given tenant only.

## BASIC PRINCIPLES

Three basic principles should be followed in deciding how income and expenses should be shared. They are:

- Land, labor, capital, and management resources should be combined to yield, in the long run, the maximum net income for the farm.

- Needed resources, including land, not owned by either landlord or tenant should be obtained if reasonably possible.

- All long-lasting resources should be used so that over a period of time they will be fully developed, sufficiently maintained, and adequately conserved.

### Maximize Net Income

The basic principle to follow in achieving the highest net income is to spend each dollar so that it will return as much in one use as it would return in any other use. Do not invest money in machinery or fencing, for example, if the dollars spent would yield smaller returns than they would yield if spent for fertilizer or pesticides. Where fixed investment expenses and some fixed operating expenses are involved, progress in meeting this condition might well be slow. But plan consciously in that direction.

Your first step is to plan what crops should be grown and what livestock should be kept. Then decide what resources are necessary to produce them efficiently. This should be done before you become concerned with rental rates and operating expenses. Start your planning with the resources you own and, if necessary, consider what

additional resources are required for good farming. The farm planning operation is essentially the same for your tenant-operated farm as it would be if the farm were operated by an owner at the optimum level of production.

In dividing expenses and income, establish incentives for each party to contribute the quantity of each resource that is necessary to maximize net income. As far as possible, create an incentive for using each contributed resource with the greatest efficiency.

### Obtain Needed Resources

After you have figured out what is needed on your farm to maximize net income, you must determine whether it is possible to obtain all of these resources. If neither the landlord nor the tenant owns some needed resource, how can it be obtained? Are more land, fences, or additional buildings needed? Or perhaps a more adequate supply of water? Is more machinery or additional labor needed? Or perhaps more cash to meet current expenditures? It may become necessary to make adjustments in your farm plans to minimize the adverse effect of limited resources.

### Develop, Maintain, and Conserve Fixed Resources

In planning the use of fixed resources, remember that many of them last for a long period of time—much longer than the typical annual lease.

Many fixed resources on the farm are subject to further *development*. This is particularly true of land, water supply, buildings, fences, and many

other aspects of the farm real estate. It is true also of breeding herds and flocks and of machinery and equipment. The way in which income and expenses are shared should not hamper the fullest economic development of such resources. Here, the added value of development should be considered as income and the costs of the development as expenses.

Many resources are subject largely to *maintenance* only. But maintenance of land and buildings is not easy on tenant-operated farms, particularly on those rented for cash. Your agreement should provide for full maintenance of the property. In general, the owner of a resource should bear the cost of keeping it in normal repair. Maintenance of many items, particularly those that depend upon day-to-day activities, is largely in the hands of the tenant. See that materials, supplies, and tools are available for adequate maintenance.

During recent years, we have heard much of the unique problems of soil and water *conservation* on tenant-operated farms. Because of provisions in the lease, Federal and State conservation programs encounter more problems on tenant- than on owner-operated farms. Arrangements regarding terraces, stripcropping, grass waterways, and other conservation structures are sometimes difficult to provide on tenant farms. Dams, ponds, wells, and other means of supplying water present quite different problems on tenant than on owner farms. Crop rotations, grassland farming, and livestock enterprises are likely to be arranged to accommodate the convenience of farm renting. The sharing of income and expenses should encourage, not discourage, adequate conservation of the resources.

## INCENTIVES

The most frequently stated principle in determining farm rental is that the farm income should be shared on the basis of the relative contributions of each party. This has been called the contributions approach. It seems logical, straightforward, and fair that each party should share in farm income in the proportion he contributes to the production of the farm.

Certain internal relationships must be worked out to prevent the sharing of expenses and income from adversely affecting the use of resources. These internal relationships are termed "incentives."

Three incentives must be provided if your division of income and expenses is to make possible the fullest application of the three principles outlined above. These incentives are:

- Each variable expense must be shared in the same proportion as the products obtained from it are shared.
- Income from each enterprise must be shared in the same proportion.
- The income resulting from each expense must accrue to its contributor, even though the income is received several years after the expenditure is made.

### Share Variable Expenses

In arriving at a proper sharing of variable expenses, you will need to take two steps: (1) Decide on how total fixed expenses will be shared and (2) then share *each* variable expense in that proportion. An idea of how to divide expenses into fixed and variable expenses and how to assign dollar



values to each is discussed later. Briefly, *fixed expenses* are those that do not change in total amount with changes in farm output. The quantity of these contributions can be determined at the beginning of the year; it remains unchanged except in case of a major catastrophe, such as a fire or flood, the consequences of which are normally absorbed by the holder of the affected resource. *Variable expenses* are those that increase or decrease in total amount with expansion or contraction of farm output. Variations may be made during the year to take advantage of unforeseen developments, for example, changes in prices, introduction of new technology, unusual infestation of pests, and variations from normal weather.

The two parties should share each variable expense *in the same proportion as all other variable expenses*. Do not provide for one party to pay all of one variable expense and for this to be offset by the other party paying all of another variable expense.

This condition is usually met in cash leases, as the tenant pays all variable expenses and receives all the income. His cash rent does not increase or decrease because of how much or how little he puts into variable expenses. But for share renting, the situation differs. If each variable expense is not shared in the same proportion as is the income from it, the party who supplies a larger share of expenses than he receives of income has an incentive to furnish a smaller amount (or none at all) of that variable expense than is required for the most profitable combination. Or, if he does supply the proper amount, income due him will flow to the other party.

Neither of these alternatives is desirable. One is certain to happen in

each instance unless one variable expense is balanced against another so that total variable cost is shared in the same proportion as total income and the proper quantity of each variable expense is used. The meeting of this simple incentive condition is easier than trying to balance and keep in balance variable expenses that are shared in different proportions.

Thus, all variable costs must be shared under all straight share leases, and *each* variable cost must be shared in the same proportion. The proportion of each of the total variable expenses that each party should pay is the same proportion that each party pays of the total fixed expenses. This is also the same proportion that each party should receive of the farm income.

### **Share Income on Each Enterprise**

Total farm income could be shared in the same proportion as are total fixed and variable expenses without meeting the second incentive condition—the sharing of income from each enterprise in the same proportion. Unless this latter incentive condition is met, each party would favor any enterprise of which he receives a larger proportion of the product than his share of the expenses, other things being equal. This would mean that the quantity of each enterprise produced would be influenced by how expenses are shared rather than by the most efficient combination of resources or by their availability.

For example, if the tenant receives a larger proportion of the corn than he does of the soybeans, he has an incentive to grow more corn and fewer soybeans and the landlord has an in-

centive to grow more soybeans and less corn. If the returns from all enterprises were shared alike, both landlord and tenant would have the same incentive in choices between enterprises.

Do not let the division of expenses and income make necessary the introduction of rigid controls over the size of each crop or livestock enterprise to be carried on. Give each party the incentive to maximize total farm income by selecting the most profitable combination of enterprises.

### **Share Expenses on Longtime Investments**

The third incentive condition must be met to encourage each party to contribute resources from which income may not be received until after his interest in the farm has ceased. The problem arises because the income from some resources is returned over a number of years, and the shorttime interest of the party may not permit him to receive the income. For example, an aged landlord may not have the incentive to add expensive improvements that will return only a small income during his prospective lifetime. The tenant is discouraged from making expenditures for improvements that may be used up only after he leaves the farm.

The resources to be used in production and the annual sharing of expenses and income may be worked out with great care. But if either party has no reasonable opportunity to receive the full income from an expenditure because of the lapse of time, he will have less incentive to make that expenditure.

Because of their importance to landlords and tenants alike, the three basic principles and three incentive condi-

tions to be met in determining rent bear repeating:

#### **BASIC PRINCIPLES**

- Combine resources so as to maximize net farm income.
- Obtain needed resources rather than limit net farm income.
- Develop, maintain, and conserve all long-lasting resources.

#### **INCENTIVE CONDITIONS**

- Share each variable expense in the same proportion as the products are shared.
- Share income from each enterprise in the same proportion.
- Assure each party his full share of the income from long-lasting investments.

We are now ready to discuss the proportion of each expenditure that will be furnished by each party. The step-by-step application of these principles and the meeting of these incentive conditions will tend to increase your understanding of them and to answer questions about them that may be in your mind. In discussing the division of expenses and income, we first consider share renting, because a large majority of farm leases involve share rent.

We shall assume that the production period with which we are concerned is 1 year. The planning on most rented farms is from year to year, and usually the rental payment is based on 1 year's operation. We shall assume also that the farm has one landlord and one tenant, although the same principles and incentives apply to other leasing situations too. It is further assumed that the particular landlord and tenant

are in agreement as to all matters except the sharing of expenses and income.

## SHARING COSTS ON SHARE-RENTED FARMS

The last step before determining the annual cost (expense) of each resource used in farm production is to decide what resources and how much of each are to be supplied. This step should be worked out on the basis of the resources that are needed and can be supplied to get the greatest net profit from the whole farm.

In estimating the annual cost of each resource and in deciding how the supplying of each resource will be shared, prepare a work sheet or use the Table for Estimating Rent on page 12.

You will note that the resources are divided into two major types: I. Fixed Expenses and II. Variable Expenses. Fixed Expenses are divided into: A. Fixed Investment Expenses and B. Fixed Operating Expenses. In using this classification for your farm, some variation in the location of some individual expense items in each of these categories may be made.

List under *fixed expenses* those resources that you judge will remain unchanged during the year regardless of what level of production you may attain on the farm. The *variable expenses* are those that will likely vary during the year, depending on prices, weather, changes in farm plans, and other factors that must be taken into account as the lease year progresses.

Fixed expenses can be rather accurately established before the lease year begins. But this requires that you decide what resources will be used and who will supply them. The chief fixed

expenses are for long-term investments. These are things that the landlord or tenant own or may buy—land, buildings, fencing, truck, machinery, equipment, breeding livestock, operating cash, and such items. Each fixed investment expense should be listed under that heading in the Rent Table.

The fixed operating expenses include the current expenses that can be rather accurately determined before the lease begins and that remain unchanged as the year progresses. They are expenditures that will be incurred just as surely as will expenses for fixed investments. They include the labor that is committed to the farm, depreciation, repairs, management, and relatively permanent land improvements.

It is usually as easy before the lease year begins as after it has ended to estimate the annual cost of the fixed investment expenses and fixed operating expenses. Items that must be committed to production in a predetermined quantity, those items that will last for more than 1 year, and those for which the cost does not change with intensity of use are called fixed. Each fixed operating expense should be listed under that category in the Rent Table.

*Variable* expenses are usually met by a current payment; the total amount used and the cost can be determined best at the end of the year. Usually these expenses are for items used up during the year, and adjustments may be made in them to meet changing conditions. They include gas and oil, telephone and electricity, feed and seed, pesticides and insecticides, and so on. They should be listed under variable expenses in the Rent Table.

Any variable or fixed expense, such as that for gasoline or fertilizer, for which there is a well-developed market might well be entered at the market

price. Any variable or fixed expense such as that for management, for which a ready market does not exist should be valued on the basis of what the resource might earn elsewhere.

Admittedly, some economies can be effected by timing the purchase, using discounts for quantity purchases, paying cash, and by other means. The basic idea is to estimate as closely as possible the annual cost of each contribution.

### Fixed Investment Expenses

Some fixed investment expenses are listed in column 1 of the Rent Table; others may be added in the blank spaces. In column 2, estimate the total value of each resource.

Your decision as to the estimated value of the *farm* (land and buildings) is very important. It is usually the largest single item, and it is the landlord's major contribution. Its annual cost, therefore, will have an enormous effect upon how the variable expenses will be shared and how farm income will be divided.

Land and buildings are sold together as one unit. It might be easiest and most accurate to put a value on "the farm." You may want to use what the farm would sell for. If so, assume a willing buyer and a willing seller, not a forced sale. You may want to think of a normal investment or longtime value as well as the current market value. But do not estimate the value on the basis of a nearby "eighty" bought for farm enlargement.

In some situations, near urban expansion or oil development, for example, you may need to think in terms of the farm's value for agricultural production. Avoid inflated values, regardless of origin, for the rent is to be paid from what the farm will produce.

Handling the farm as a unit will not always solve all evaluation problems. Workable agreement and full understanding may require separating buildings from land. This is especially so in a crop-share-lease under which the tenant has many livestock.

A question frequently raised is, what rental arrangements should be made for the *house* in which the tenant lives and the house for the hired man, if any? One approach is to charge a separate cash rent for the dwelling. If this approach is followed, the annual cost of the dwelling should be valued in the same way and at the same rate as other fixed investments, as the dwelling is also a fixed investment expense and presumably should provide the same rate of return as barns, sheds, fences, and such items. Its estimated value should be deducted from (or not included in) the value of the farm buildings when land and buildings are estimated separately and from the whole farm when they are combined. Annual costs for depreciation and repairs on the dwelling should be calculated separately in determining a cash rental charge for the dwelling.

Going rates on comparable housing may be a guide. Enter the rental for the dwelling at the end of the Rent Table.

The payment of cash rent for the dwelling may be contrary to local custom in many areas, but the local custom may need to be reevaluated. If the dwelling is primarily a consumption rather than a production item, it should be treated as a consumption item in determining the rent.

Many tenants find it difficult to get their landlords to make desired improvements to the dwelling. Landlords say that as such an expenditure would not increase production, why make it? Under all forms of leasing,

# TABLE FOR ESTIMATING RENT

Item of expense  (1)	Esti- mated total value  (2)	Esti- mated inter- est rate  (3)	Estimated annual cost		
			Whole farm  (4)	Land- lord's share  (5)	Ten- ant's share  (6)
I. FIXED EXPENSES:	<i>Dollars</i>	<i>Percent</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>
A. Fixed investment expenses:					
1. Land . . . . .					
2. Farm buildings . . . . .					
3. Tractor, truck, and automobile . . . . .					
4. Machinery and equipment . . . . .					
5. Breeding stock . . . . .					
6. Operating cash . . . . .					
7. _____					
8. _____					
9. _____					
10. Total section A . . . . .	xxx	xxx			
B. Fixed operating expenses:					
11. Labor . . . . .					
a. Tenant's . . . . .					
b. Unpaid family . . . . .					
c. Landlord's . . . . .					
d. Hired . . . . .					
12. Depreciation . . . . .					
a. Buildings, fences, and others . . . . .					
b. Tractor, truck, and automobile . . . . .					
c. Machinery and equipment . . . . .					
13. Repairs . . . . .					
a. Buildings, fences, and others . . . . .					
b. Machinery and equipment . . . . .					
14. Taxes* . . . . .					
15. Insurance* . . . . .					
16. Limestone . . . . .					
17. Rock phosphate . . . . .					
18. Conservation measures . . . . .					
19. Management . . . . .					
20. _____					
21. _____					
22. _____					
23. Total section B . . . . .					
24. Total section I . . . . .					
24a. Percent contributed by: Landlord . . . . .					
Tenant . . . . .					

\*Include taxes and insurance only if they have been deducted from (or not included in) annual cost of property in column 4, section A.

## TABLE FOR ESTIMATING RENT (Continued)

Item of expense  (1)	Estimated annual cost		
	Whole farm (4)	Land-lord's share (5)	Ten-ant's share (6)
<b>II. VARIABLE EXPENSES:</b>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>
25. Hired labor, including board .....			
26. Tractor operating costs .....			
27. Truck operating costs .....			
28. Automobile, farm operating costs .....			
29. Machine work hired .....			
30. Seed .....			
31. Commercial fertilizer .....			
32. Pesticides, insecticides .....			
33. Other crop expenses .....			
34. Feed .....			
35. Veterinary and sanitation .....			
36. Other livestock expenses .....			
37. Electricity for the farm .....			
38. Telephone for the farm .....			
39. ....			
40. ....			
41. ....			
42. Total section II .....			
43. Grand total: Sections I and II .....			

Income to be divided ..... \$ \_\_\_\_\_

Cash rent on farm dwelling:

Estimated value \$ \_\_\_\_\_ at \_\_\_\_\_ percent .... \$ \_\_\_\_\_

Depreciation, insurance, and upkeep (add) ..... \$ \_\_\_\_\_

Total dwelling rent ..... \$ \_\_\_\_\_

a cash rental for the dwelling should encourage the landlord to modernize the house and keep it in good repair. Cash rent should be paid also for the garden, orchard, or poultry house, if used exclusively by the tenant as a consumption item.

Do not add cash rent on the dwelling to an existing arrangement without adjusting other details of cost-income sharing. The objective of a separate and distinct payment for the dwelling is to give the two parties a basis for agreement—one that does not interfere with production decisions.

Large items such as *truck*, *tractor*, and *automobile* may need to be valued separately. If the automobile is used also by the family, decide what proportion of its value is assignable to the farm business. You may use current value—what each item would bring at a farm sale. You may want to consider also its cost less depreciation. But some accounting procedures provide for full depreciation of some machines long before their use value is exhausted. To set a reasonable value on these items, think in terms of what it costs to supply them to the farm business.

Your inventory of machinery, equipment, livestock, feed, seed, and supplies should be accounted for. Include also items of permanent investment value that will be purchased for use on the farm. Again, you may best use a market price concept.

The estimated total value of these items is finally agreed upon by mutual discussion and bargaining between the two parties. Keep the valuation of all items in balance, one with another, by following so far as possible the same valuation process for each item, regardless of who owns the resource.

After you have completed column 2 for all fixed capital investments, your

next decision is about the estimated interest rate (col. 3). The rate of interest for each item should be comparable to what might be earned in investments with similar returns, risks, and associated costs. Be sure that the interest rate does not cover taxes, depreciation, repairs, and insurance if these items are included in section B. You might well ask this question:

What rate of interest could be expected on a comparable investment? For example, what return would be expected if the investment were in a farm mortgage rather than in the farm? To put the matter another way, if the farm were sold rather than rented, what interest rate could be obtained on the real estate mortgage?

The estimated annual cost of each fixed investment for the whole farm (col. 4), is the product of column 2 multiplied by column 3. The annual dollar value of these fixed capital investments, as shown in column 4, indicates how important are the estimated values and interest rates.

You need to decide which party is to furnish each item not already owned and to determine the annual cost for each. Enter the appropriate shares of all capital investments in dollar values in columns 5 and 6, which together should total the same as column 4. One of the parties will furnish all or many of these items, but some of them may be shared. Be sure that each party understands what he is to furnish. A table with more lines than the Rent Table may help in listing each item separately. This is a work table; it does not need to become a part of the lease.

A certain amount of *operating cash* is usually necessary to carry on the farm operation during the production season. This operating cash, for example,

may be in a demand account in the bank where it is immediately available to meet expenses that arise, but where it earns no interest. The annual cost in the Rent Table should be based on a balance necessary for the farm business, not an excessive amount for other business or personal use.

### Fixed Operating Expenses

The estimated total annual cost of each fixed operating expense is entered in column 4. Each of these totals is divided into the share that each party will furnish and entered in columns 5 and 6.

Usually, *labor* is the major fixed operating expense. Because the landlord furnishes all of the land, the tenant usually furnishes all of his own and family labor. This does not mean that the two parties may not rent additional land to make the farm larger or hire additional labor if such is needed. In some instances, particularly those in which the landlord and tenant are relatives (usually father and son), some of the labor might well be furnished by the landlord.

If the amount of *hired labor* is constant for the lease year and is known at the beginning of the year, then it should be treated as a fixed, not a variable, operating expense. The agreed-on amount of labor will be used, whether for a full year or for only a few months during the busy season. Such hired labor is a fixed operating expense; it will be employed regardless of the level of production. On the other hand, the hired labor that may be expanded or reduced with the level of production desired is a variable operating expense. This is usually labor hired for short periods, by the day or week.

Likewise, the available *family labor* is usually committed to the farm business. The amount of the *landlord's labor*, if any, that is committed to the farm business is usually known at the beginning of the lease year. This labor should be classified as a fixed operating expense.

Usually the tenant's labor, all or a specific proportion of it, is committed to the farm business. The reason is obvious for all share-rented farms. The landlord has committed fully his land, buildings, and other fixed costs. His rental income depends partly on the amount of labor that is applied to these resources. In recognition of this fact, some leases contain a provision that the tenant will neither operate additional land nor engage in off-farm work without the consent of the landlord. The operator's labor is therefore thought of as a fixed operating cost. The basic assumption here is that the farm is large enough to require the full time of the tenant operator. If it is not, some agreement may need to be reached as to the proportion of the tenant's labor that should be committed to the farm.

Put a value on the labor from each source. Agree on the tenant's labor first. His labor should be valued at the going rate for an equally qualified full-time hired man living on the farm. Remember that the tenant's management is to be valued separately on line 19.

After the annual cost is determined for the tenant's labor, estimate the amount of labor that will be furnished by the tenant's family, if any. Put this in terms of man-month equivalents; that is, decide how many months of man labor would be equal to that furnished by the tenant's unpaid family labor. Then multiply these man-



months by the rate agreed upon for the tenant. Do the same for the labor, if any, furnished by the landlord. Do not include his management; it is to be included as a separate item.

*Depreciation* is a fixed-operating expense that must be met by the person who owns the resource. It is applicable largely to buildings, fences, tile, and similar items that have been added to the land. Included also are machinery, equipment, trucks, tractors, and such items. Livestock may be included, but this would be unusual, as the general practice is to maintain or improve breeding herds, not to let them depreciate.

The estimated annual cost for depreciation should be based on the cost of the resource and the number of years it is likely to last if used as anticipated on the farm. Your county agricultural agent or college of agriculture can furnish you typical rates of depreciation for various items. Adapt these rates to your own situation.

The annual cost for *repairs and maintenance* should be estimated. Make a separate estimate for the residence, for it is carried as a special item. The cost of repairs should include only materials and necessary skilled labor. The tenant's and landlord's labor has been included already. The tendency is to underestimate the cost of repairs. When this is done, depreciation is increased, but more important, efficiency and possibly total farm production is reduced.

The rate of depreciation is related to the expenses for repairs. If repairs are to be made as soon as needed, then depreciation may be less on many items. If you are going to keep a tight rein on expenditures for repairs, depreciation will be higher.

Keeping all resources in a good state of repair will reduce losses that arise

because of breakdown at the crucial times of planting, cultivating, and harvesting. Livestock losses that are due to faulty buildings and equipment will be reduced also. Your county agricultural agent or college of agriculture can furnish you general information about typical costs of repairs. But you must make estimates in terms of your particular situation. For example, repairs on a new barn or tractor will be considerably less than repairs on an old barn or on a tractor the last year or two before it is replaced.

Are repairs fixed or variable expenses? Decide this in light of your particular situation. We have included them as fixed expenses for two reasons: (1) Fairly reliable estimates of the costs of repairs can be made; and (2) the commitment as to repairs should be made before the lease year begins.

*Real and personal property taxes* represent a cost attendant to some of the resources contributed by the landlord and tenant. The lease, therefore, should state which taxes should be paid by the landlord and which should be paid by the tenant.

You may want to give some special thought to taxes as expenses in the Rent Table. Property taxes are a special type of cost. They are assessed against ownership rather than against income. They must be paid and are collected each year whether or not the farm has income above costs. But the taxes as such do not increase the income-earning capacity of the farm. No one can pay more taxes to make the farm earn more, or pay less to decrease costs. Taxes affect the net income of the resource owners but have no direct effect on the gross income. For this reason, landlord and tenant may want to exclude them entirely from the Rent Table.

However, landlord and tenant may regard taxes as one of the necessary costs of doing business and will want them included in the rent calculations. In this case, it is essential that taxes be counted one time only. Be certain that you do not account for taxes once in the annual cost of the resource, as calculated in section *A*, and again as a separate item in section *B*. In order to prevent the shift of property taxes away from the property owners, which results from double counting, property taxes should be excluded from the calculations in the Rent Table if they have already been taken into account in the value of the resource being taxed (col. 4).

If both parties to the lease prefer to include property taxes as a cost in the rent determination—

- Make sure that tax costs of both parties are included.
- Count only business taxes, with household goods excluded.
- Count each tax cost only once. Property tax is double counted if included (a) as a separate listed cost (tax), and (b) also as part of the annual resource cost.

Before deciding whether to include or exclude property taxes, the two parties to the lease could well afford to compare results. How does it work out if they are included? How does it work out if they are excluded? How does it work to leave them out of the Rent Table and pay them from gross income, before dividing income between the two parties? The fact that customary practice may have favored including them in the rent determination as a specifically itemized cost need not weigh too heavily in the balance. The Rent Table is constructed so you can

either include or exclude taxes and insurance.

*Insurance* on fixed investments may be determined quite accurately. Usually, it can be assigned easily to the owner of the investment. If we assume that the resource owner should bear the cost of assuring that his resource will continue to provide its productive services throughout the lease period, then the resource owner should absorb the cost of the insurance. The resource owner may either accept the risk (the same as insuring himself) or take out a policy with a company that takes the risk in exchange for payment of a premium. Either way, the lease should provide that the productive capacity of the resource is to be restored in event of its loss.

The parties should decide whether the annual cost of the buildings, machinery, or other resource in section *A* of the Rent Table includes an allowance for risk of loss. If it does not, they may want to enter the cost of the insurance in section *B* of the Rent Table. If it does, they may want to omit insurance from section *B*. In any event, the parties probably would not want to enter insurance unless an actual policy had been taken out with an insurance company. As an alternative, some may wish to exclude insurance from section *B* in the Rent Table and subtract the premiums from gross income, before dividing the income.

*An important caution* should be made here. The total annual cost of any fixed resource for rent-determining purposes may include interest or returns on fixed investment, taxes, insurance, depreciation, repairs, and maintenance. Care must be taken *not to include any expense twice*. Keep these items clearly in mind when estimating annual cost of each party's contribution. For example, do not

include in the annual value of fixed investments enough to keep the item in repair, to set aside for depreciation, or to pay for taxes or insurance if you also include these items separately. Be cautious not to "double count" any item. This would not be done obviously. But do not overlap any of these expenses in making estimates of annual costs.

You may also want to include in fixed operation expenses such items as *limestone*, *rock phosphate*, and *conservation measures*. These are costs that can and should be decided upon before the beginning of the year. The effects of these expenditures usually last more than one production season. You have three alternatives: (1) The landlord bears the entire cost; (2) the tenant pays the entire cost; or (3) the cost is divided between the two parties. If the tenant pays part of the cost, agree to compensate him for his share of any item not used up when the lease is terminated.

The problem here is to encourage the supplier of such resources to furnish the quantity needed on the farm. Agreement to compensate the tenant when the lease is terminated for the unexhausted value of such contributions would provide an incentive for him to make them. Your lease form has a section for this purpose under the heading of *Compensation for Improvements*. If crop-share rent only is paid but the tenant keeps some livestock, one approach is to place a value on the manure and reimburse the tenant for its value to the farm.

*Management* is another fixed operating expense. It is probably the most difficult expense item to estimate accurately. Yet it is a valuable resource that should not be overlooked. Only a few suggestions can be made. Do not include it under labor. Arrive at a

realistic figure for management as a separate item.

The first decision is concerned with the total that should be entered for management in column 4. What would be the cost if you were to hire a person to make all management decisions: For example, what would management cost if the landlord employed a manager to plan farm operation with hired labor? Most professional farm management services provide only a part of the management function. Therefore, the management figure should be something more than the rate paid by the landlord for typical professional management services.

Here are some suggestions: First, many important management decisions are made when the lease is negotiated. The parties work together on this operation. Their contributions at this time need not be added, if they are roughly in proportion to other contributions.

Next, many management decisions are made during the year—some by the tenant, some by the landlord, and some jointly. A landlord who can render unique management should be paid for it. One example is a good judge of livestock when feeding or breeding animals are bought and sold. Recognize this ability by putting it in at a price that reflects its quality. The management of a tenant who is exceptionally good at doing the right thing at the right time regarding day-to-day operations of the farm, for example, should be entered at a price that reflects superior management. The division of the total management cost between landlord and tenant is a matter of negotiation between the two parties, depending on the value of the services the two perform.

## Calculating the Share

When you have the total annual costs for each fixed expense, enter the fixed annual investment costs on line 10 and the fixed annual operating costs on line 23. Add the two together; record the sum in line 24. Next, calculate the percentage of the total furnished by each party, and enter on line 24a. These percentages are important; they show how each variable expense should be shared and how farm income should be shared. As each variable expense should be shared exactly as are fixed expenses, you have the answer also as to how total expenses are shared. This gives you the answer to how total farm income is to be shared, for each party is to receive income in proportion to what he contributes to production.

Determination of share rent is mentioned here for two reasons: (1) When you have decided how fixed investment expenses and fixed operating expenses are shared, you have decided how income should be divided, and (2) if this sharing is not entirely satisfactory, you should go back and make readjustments in who is to supply how much of selected fixed items. Many of these items of fixed costs are already owned by one party. Some of them—machinery, for example—may be shifted to the other party. Also, the items yet to be purchased are subject to discussion as to who supplies them.

Do not revalue the total annual cost of an item to make the percentages in line 24a come out to some preconceived notion of how the costs and returns should be divided. Do not rearrange variable expenses to arrive at a 50-50 sharing, or a  $\frac{1}{3}$ - $\frac{2}{3}$  sharing, for instance. Why insert an incentive that may reduce net farm income just to

make things come out even? Is not a 40-60 or a 47-53 sharing just as acceptable to you as the more conventional fractions? If not, why not? What price in total farm income would you be willing to pay for a nice round percentage?

You may want to adjust the percentage to a whole number, for example, 47-53, rather than leave it at 47.1-52.9. But if you must reach a 50-50 sharing, or some other conventional fraction, make the adjustment in fixed rather than in variable expenses. Do not leave either party with an incentive to supply less of any variable expense than should be used to maximize net farm income.

## Variable Operating Expenses

These are the current annual expenses that vary with output. They depend partly on decisions made during the year. Your job here is to estimate as best you can what variable cost resources should be used, about how much of each will be needed, and about what the price will be. For each variable cost, put the total estimated expense in column 4. This total may be divided between columns 5 and 6 in the same proportion as are total fixed expenses. But you need not divide the variable expense for each individual item between landlord and tenant. If you prefer, the total on line 42 can be divided, so long as *each* (not the total) variable expense is shared in the same proportion.

The final contributions of the two parties for fixed expenses are assumed to be the totals in line 24. The actual total for variable expenses is determined at the end of the year, after all variable expenses are paid.

## ADJUSTMENTS FOR NONSHARE RENT

The preceding discussion on estimating annual expenses is completely applicable only to situations in which share rent alone is paid. Special problems arise when cash, standing, or head rent is used. Additional problems arise when crop-share-cash rent is used.

### Cash Rent

Cash rent is usually a fixed amount, which is determined before the lease year begins. Thus, an estimate of the anticipated income is a basis for a decision as to the amount of cash rent. Under cash renting, the tenant usually pays all of the variable operating expenses, which are entered in columns 4 and 6. All fixed expenses are calculated in the same way as for share rent. The total annual expense for each party is determined by adding line 24 (total of sections I, *A* and *B*) to line 42 (total of section II).

You will now need to estimate total farm income by determining the quantity of each product that is likely to be produced. Then multiply each amount by its estimated price. The total of these items gives you the total farm income. This step is not necessary in share renting as the income is to be shared regardless of amount.

Under share leases as discussed above, the risk is usually shared in the same proportion that the income is shared. If so, an item for risk need not be included. Under a cash lease, however, the tenant usually bears the risk. Under a variable cash or standing-rent lease, risks are divided but not in the same proportion as under share renting. Under a crop-share cash lease, the division of risk depends

upon the extent to which the rental payment is based on cash rent.

With an estimate for total farm income and an estimate for each party's contribution to total farm expenses, you are in position to calculate the amount of cash rent. Cash rent would be the same proportion of the estimated total farm income as the landlord's proportion of total farm expenses.

Cash rent becomes a specific dollar figure, calculated as a percentage of the *estimated* farm income. If the actual farm income is higher or lower as a result of superior management or low crop yields, the tenant benefits or suffers accordingly. The landlord is paid a specific cash return. The tenant is provided an incentive to maximize actual farm income, as he can keep all income above the cash rental.

In using this method of determining cash rent, estimate the cash rental value of the dwelling separately.

If you do not want to estimate total farm income, you may calculate cash rent by this method: Estimate the annual costs to the landlord for fixed expenses—that is, the fixed investment expenses and fixed operating expenses—and make an estimate of any profits due the landlord. Add these items together for an estimate of cash rent.

If you follow this alternative method, you would be well advised to calculate total farm expenses and income as explained above. In this way, you are in a good position to decide whether the estimated cash rent is reasonable.

### Variable Cash Rent

If you plan to select a variable cash rent based on substantial changes in

prices or production conditions, or both, use the suggested procedure for cash rent (page 20). The calculations will give you the best estimate of base rent. Separate estimates would be needed only to determine variations from the base rent.

### **Standing Rent**

Calculation of the quantity of any crop, livestock, or livestock products to be given as standing rent follows the same steps as cash rent. After the amount of cash rent is determined, add this step: Determine what quantity of the selected item or items of production would be necessary, at the estimated prices, to yield the desired amount of cash. This is the amount of produce to be paid as standing rent, or its equivalent value in cash at the market price if farm production fails.

### **Head Rent**

In some areas, grazing land is rented on a "per head" basis. This method is particularly suitable when an effort is made to control the number of animals grazed on a given area. The number of head that fully utilize but do not overgraze the land should be determined and the lease should set this number as a maximum. Head renting is similar to cash rent in that a set fee is paid, but in this instance, for each animal unit rather than for a given amount of land. Head rent may be calculated by dividing the cash rent as estimated above by the number of animal units to be grazed on the land.

### **CROP-SHARE-CASH RENT**

When a part of the rent is to be paid in cash and a part as a share of one or

more crops, several unique problems arise. These problems emerge because of the tenant's livestock. A part of many of the fixed investment expenses, fixed operating expenses, and variable expenses are assignable to the livestock enterprises. The crop-share-cash plan provides that cash rent will be paid for all contributions of the landlord to the livestock enterprise and to crop enterprises from which he does not receive a share rental. This means that share rent is usually paid on the major crop enterprises and cash rent is paid for hay, pasture, buildings, and facilities used for livestock. The tenant may sell or feed any or all of his share of the crops on which share rent is paid. He may buy for cash all or a part of the crops given to the landlord as share rent.

The starting point is the same regardless of the kind of rent; that is, an outline of how the farm will be organized and operated. List all of the fixed and variable expenses needed to maximize total net profits. Show what resources will be used, how much of each, and an estimate of their cost. The procedure for calculating these expenses remains unchanged. All incentive conditions still hold.

The unique problems of determining crop-share-cash rent involve the determination of how much of each fixed and each variable expense is related to the share-rent enterprises and how much to the cash-rent enterprises. The essence of the matter is to divide all fixed and variable expenses into two groups on the basis of those that contribute to the production that is shared and those for which cash rent is paid.

You will have used the Rent Table to show each item of expense for the whole farm. Now start at the top of the Rent Table and divide each item

of expense between share-rent and cash-rent enterprises. This may be done on the Rent Table by inserting the estimated figure for share-rent in column 4 above the "whole farm" figure. Now divide the share-rent enterprise expenses between landlord and tenant in columns 5 and 6. The difference between the "whole farm" figure and the inserted share-rent estimate in column 4 is that part of the expense assignable to the cash-rent enterprises.

Complete the entire operation as outlined previously for share leases. Go through fixed investment expenses first; then fixed operating expenses; and next determine the proportion of the fixed expenses furnished by each party. As for share renting, this is the percentage that each party should contribute to variable expenses on share-rent enterprises and the percentage of each share-rent enterprise that should be paid as rent.

How much of each fixed expense is assignable to the share-rent enterprises is a matter for joint decision. Be as accurate as possible. Again, the major items involved are the landlord's land and buildings and the tenant's labor and machinery.

Since under the crop-share-cash lease, the tenant usually receives all the income from the livestock, he should own all of them and should own, or pay for the use of, the livestock equipment and facilities on hand (that is, the fixed expenses). He should pay all variable costs associated with the livestock.

In general, fixed operating expenses on share-rent enterprises for depreciation and repairs should follow ownership of the several items in the Rent Table. Handle the property taxes and

insurance as recommended for share renting.

Variable expenses on share-rent enterprises will be divided in the same proportion as are fixed expenses on these enterprises. The main problem is one of keeping accurate records of which variable expenses are assigned to share-rent enterprises and which are assigned to cash-rent enterprises. These records will be used at the end of the lease year when settlement is made.

In calculating the amount of cash rent, we recommend that you do not try to estimate total farm income and relate cash rent to it, as suggested when cash rent only is paid. Rather, we recommend that you follow the alternative method outlined. That is, total the annual costs to the landlord for his fixed contributions (expenses) on which cash rent is to be paid. Then make an estimate of any profits due him. Next add these items together for the estimated cash rent.

Another, and perhaps an easier, way to solve the share-cash rental problem is to calculate the sharing of expenses and income as though crops only were to be grown on the farm and share-rent only were to be paid. Then the tenant would pay cash rent for hay and pasture (and other crops) by buying the landlord's share at some method of pricing agreed upon in advance. A cash rent would be paid for the dwelling and also for barns and other livestock facilities.

## ACCOUNTS AND RECORDS

The procedure outlined above can be made to work most effectively only if adequate farm records are kept. Good records furnish a basis for

settling accounts at the end of year and for planning the next year's cropping plan and livestock system. They can be used in estimating fixed and variable expenses.

You should provide for an annual settlement to take care of all expense and income items. The settlement record would show who paid property taxes if they were not paid by the resource owner, that cash rent was paid for the dwelling and other consumption items, and the handling of all other items for which a settlement is made.

From an operations viewpoint, arrangements can be made for one party—usually the tenant since he is on the farm—to pay the bills as they

become due. On settlement day, the accounts for the year can be closed by a cash transfer of any balance that is due.

Ideally, each party should pay the predetermined share of each variable expense at the time the purchase is made. In practice however, this is often difficult to achieve, so it may be advisable for the tenant to pay the whole bill and settle later. But if no settlement is made until the year's end, it may cost the tenant a good deal to keep a cash balance on hand. If expense items are large, settlement should be made promptly or, alternatively, allowance should be made in the Rent Table for the "cost" of providing operating cash.



## FARM LEASE PUBLICATIONS

Other publications on farm leases available from the U.S. Department of Agriculture, Washington, D.C. 20250, are:

- Your Farm Renting Problem, Farmers' Bulletin 2161.
- Your Farm Lease Contract, Farmers' Bulletin 2164.
- Your Crop-Share-Cash Farm Lease, Miscellaneous Publication 838.
- Your Cash Farm Lease, Miscellaneous Publication 836.
- Your Farm Lease Checklist, Farmers' Bulletin 2163.

The following farm lease forms may be obtained from your County Agricultural Agent or from Natural Resource Economics Division, Economic Research Service, U.S. Department of Agriculture, Washington, D.C. 20250.

- Crop-Share-Cash Farm Lease (Form AD 561).
- Cash Farm Lease (Form AD 562).
- Livestock-Share Farm Lease (Form AD 563).
- Annual Supplement to Farm Lease (Form AD 564).

The bulletins supersede Farmers' Bulletin 1969, "Better Farm Leases," and Miscellaneous Publication 627, "Your Farm Lease." The lease forms supersede "Standard Farm Lease" (Form Agri.-1) and "Annual Supplement to Standard Farm Lease" (Form Agri.-3).